

CLAIMS

1. An antibody that recognizes a tumor necrosis factor-related apoptosis-inducing ligand receptor (TRAIL receptor).

2. The antibody of claim 1, which is a minibody.

3. The antibody of claim 1 or 2, which comprises three or more antigen binding sites.

4. The antibody of claim 3, which comprises three antigen binding sites.

5. The antibody of claim 4, wherein three scFv units form a trimer.

6. The antibody of claim 5, wherein two of the variable regions in the scFv units are linked together *via* a linker with zero to two amino acids.

7. The antibody of claim 6, wherein the linker comprises zero amino acids.

8. The antibody of claim 6, wherein the linker comprises one amino acid.

9. The antibody of claim 3, which comprises four antigen binding sites.

10. The antibody of claim 9, wherein a polypeptide comprising four variable regions forms a dimer.

11. The antibody of any one of claims 1 to 10, wherein the TRAIL receptor is TRAIL-R1 or TRAIL-R2.

12. The antibody of any one of claims 1 to 11, which induces apoptosis in a cell.

13. The antibody of claim 12, wherein the cell is a tumor cell.

14. An antibody comprising the amino acid sequence of SEQ ID NO: 2.

15. An antibody comprising the amino acid sequence of SEQ ID NO: 4.

16. An antibody comprising the amino acid sequence of SEQ ID NO: 6.

17. An antibody comprising the amino acid sequence of SEQ ID NO: 8.

18. An antibody that comprises three or more antigen binding sites and induces apoptosis in a cell.

19. The antibody of claim 18, which comprises three antigen binding sites.

20. The antibody of claim 18, which comprises four antigen binding sites.

21. The antibody of any one of claims 18 to 20, wherein the cell is a tumor cell.

22. A polynucleotide encoding the antibody of any one of claims 1 to 21.

23. A polynucleotide that hybridizes to the polynucleotide of claim 22 under stringent conditions and encodes an antibody with an activity equivalent to that of the antibody of any one of claims 1 to 21.

24. A vector carrying the polynucleotide of claim 22 or 23.

25. A host cell carrying the polynucleotide of claim 22 or 23, or the vector of claim 24.

26. A pharmaceutical composition comprising the antibody of any one of claims 1 to 21.